

PCP/10 #5

3/12/2002

Serial Number: 10/049,773

CRF Processing Date:

Edited by:

Verified by:

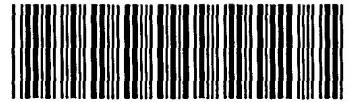
(STIC staff)

ENTERED

- Changed a file from non-ASCII to ASCII.
- Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- Edited a format error in the Current Application Data section, specifically:
- Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other _____.
- Added the mandatory heading and subheadings for "Current Application Data".
- Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- Changed the spelling of a mandatory field (the headings or subheadings), specifically:
- Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
- Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
- Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- Inserted colons after headings/subheadings. Headings edited included:
- Deleted extra, invalid, headings used by an applicant, specifically:
- Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as _____.
- Inserted mandatory headings, specifically:
- Corrected an obvious error in the response, specifically:
- Edited identifiers where upper case is used but lower case is required, or vice versa.
- Corrected an error in the Number of Sequences field, specifically:
- A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- Other: _____

* Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95



RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/049,743

DATE: 03/12/2002
TIME: 17:31:10

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\03122002\J049743.raw

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3 <110> APPLICANT: Brett P. Monia
4     Lex M. Cowser
6 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF PI3 KINASE PI10 DELTA EXPRESSION
8 <130> FILE REFERENCE: RTSP-0234
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/049,743
C--> 11 <141> CURRENT FILING DATE: 2002-01-10
13 <150> PRIOR APPLICATION NUMBER: US 09/357,070
14 <151> PRIOR FILING DATE: 1999-07-19
16 <160> NUMBER OF SEQ ID NOS: 47
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 3868
20 <212> TYPE: DNA
21 <213> ORGANISM: Homo sapiens
23 <220> FEATURE:
24 <221> NAME/KEY: CDS
25 <222> LOCATION: (197)..(3331)
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32 ggcggagggg gctttctgg tctttctgg actattccag agaggacaac tgtcatctgg      180
34 gaagtaacaa cgcagg atg ccc cct ggg gtg gac tgc ccc atg gaa ttc      229
35             Met Pro Pro Gly Val Asp Cys Pro Met Glu Phe
36             1           5           10
38 tgg acc aag gag gag aat cag agc gtt gtg gtt gac ttc ctg ctg ccc      277
39 Trp Thr Lys Glu Asn Gln Ser Val Val Val Asp Phe Leu Leu Pro
40             15          20          25
42 aca ggg gtc tac ctg aac ttc cct gtg tcc cgc aat gcc aac ctc agc      325
43 Thr Gly Val Tyr Leu Asn Phe Pro Val Ser Arg Asn Ala Asn Leu Ser
44             30          35          40
46 acc atc aag cag ctg ctg tgg cac cgc gcc cag tat gag ccg ctc ttc      373
47 Thr Ile Lys Gln Leu Leu Trp His Arg Ala Gln Tyr Glu Pro Leu Phe
48             45          50          55
50 cac atg ctc agt ggc ccc gag gcc tat gtg ttc acc tgc atc aac cag      421
51 His Met Leu Ser Gly Pro Glu Ala Tyr Val Phe Thr Cys Ile Asn Gln
52   60          65          70          75
54 aca gcg gag cag caa gag ctg gag gac gag caa cgg cgt ctg tgt gac      469
55 Thr Ala Glu Gln Gln Glu Leu Glu Asp Glu Gln Arg Arg Leu Cys Asp
56             80          85          90
58 gtg cag ccc ttc ctg ccc gtc ctg cgc ctg gtg gcc cgt gag ggc gac      517
59 Val Gln Pro Phe Leu Pro Val Leu Arg Leu Val Ala Arg Glu Gly Asp
60             95          100         105
63 cgc gtg aag aag ctc atc aac tca cag atc agc ctc ctc atc ggc aaa      565
64 Arg Val Lys Lys Leu Ile Asn Ser Gln Ile Ser Leu Leu Ile Gly Lys

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Input Set : A:\PTO.AMC.txt
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68	Gly Leu His Glu Phe Asp Ser Leu Cys Asp Pro Glu Val Asn Asp Phe			
69	125	130	135	
71	cgc gcc aag atg tgc caa ttc tgc gag gag gcg gcc gcc cgc cgg cag			661
72	Arg Ala Lys Met Cys Gln Phe Cys Glu Ala Ala Ala Arg Arg Gln			
73	140	145	150	155
75	cag ctg ggc tgg gag gcc tgg ctg cag tac agt ttc ccc ctg cag ctg			709
76	Gln Leu Gly Trp Glu Ala Trp Leu Gln Tyr Ser Phe Pro Leu Gln Leu			
77	160	165	170	
79	gag ccc tcg gct caa acc tgg ggg cct ggt acc ctg cgg ctc ccg aac			757
80	Glu Pro Ser Ala Gln Thr Trp Gly Pro Gly Thr Leu Arg Leu Pro Asn			
81	175	180	185	
83	cgg gcc ctt ctg gtc aac gtt aag ttt gag ggc agc gag gag agc ttc			805
84	Arg Ala Leu Leu Val Asn Val Lys Phe Glu Gly Ser Glu Glu Ser Phe			
85	190	195	200	
87	acc ttc cag gtg tcc acc aag gac gtg ccg ctg gcg atg gcc tgt			853
88	Thr Phe Gln Val Ser Thr Lys Asp Val Pro Leu Ala Leu Met Ala Cys			
89	205	210	215	
91	gcc ctg cgg aag aag gcc aca gtg ttc cgg cag ccg ctg gtg gag cag			901
92	Ala Leu Arg Lys Lys Ala Thr Val Phe Arg Gln Pro Leu Val Glu Gln			
93	220	225	230	235
95	ccg gaa gac tac acg ctg cag gtg aac ggc agg cat gag tac ctg tat			949
96	Pro Glu Asp Tyr Thr Leu Gln Val Asn Gly Arg His Glu Tyr Leu Tyr			
97	240	245	250	
99	ggc agc tac ccg ctc tgc cag ttc cag tac atc tgc agc tgc ctg cac			997
100	Gly Ser Tyr Pro Leu Cys Gln Phe Gln Tyr Ile Cys Ser Cys Leu His			
101	255	260	265	
103	agt ggg ttg acc cct cac ctg acc atg gtc cat tcc tcc tcc atc ctc			1045
104	Ser Gly Leu Thr Pro His Leu Thr Met Val His Ser Ser Ser Ile Leu			
105	270	275	280	
107	gcc atg cgg gat gag cag agc aac cct gcc ccc cag gtc cag aaa ccg			1093
108	Ala Met Arg Asp Glu Gln Ser Asn Pro Ala Pro Gln Val Gln Lys Pro			
109	285	290	295	
111	cgt gcc aaa cca cct ccc att cct gcg aag aag cct tcc tct gtg tcc			1141
112	Arg Ala Lys Pro Pro Pro Ile Pro Ala Lys Lys Pro Ser Ser Val Ser			
113	300	305	310	315
115	ctg tgg tcc ctg gag cag ccg ttc cgc atc gag ctc atc cag ggc agc			1189
116	Leu Trp Ser Leu Glu Gln Pro Phe Arg Ile Glu Leu Ile Gln Gly Ser			
117	320	325	330	
119	aaa gtg aac gcc gac gag cgg atg aag ctg gtg gtg cag gcc ggg ctt			1237
120	Lys Val Asn Ala Asp Glu Arg Met Lys Leu Val Val Gln Ala Gly Leu			
121	335	340	345	
123	tcc cac ggc aac gag atg ctg tgc aag acg gtg tcc agc tcg gag gtg			1285
124	Phe His Gly Asn Glu Met Leu Cys Lys Thr Val Ser Ser Ser Glu Val			
125	350	355	360	
127	agc gtg tgc tcg gag ccc gtg tgg aag cag ccg ctg gag ttc gac atc			1333
128	Ser Val Cys Ser Glu Pro Val Trp Lys Gln Arg Leu Glu Phe Asp Ile			
129	365	370	375	

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131 aac atc tgc gac ctg ccc cgc atg gcc cgt ctc tgc ttt gcg ctg tac	1381
132 Asn Ile Cys Asp Leu Pro Arg Met Ala Arg Leu Cys Phe Ala Leu Tyr	
133 380 385 390 395	
135 gcc gtg atc gag aaa gcc aag aag gct cgc tcc acc aag aag aag tcc	1429
136 Ala Val Ile Glu Lys Ala Lys Lys Ala Arg Ser Thr Lys Lys Ser	
137 400 405 410	
139 aag aag gcg gac tgc ccc att gcc tgg gcc aac ctc atg ctg ttt gac	1477
140 Lys Lys Ala Asp Cys Pro Ile Ala Trp Ala Asn Leu Met Leu Phe Asp	
141 415 420 425	
143 tac aag gac cag ctt aag acc ggg gaa cgc tgc ctc tac atg tgg ccc	1525
144 Tyr Lys Asp Gln Leu Lys Thr Gly Glu Arg Cys Leu Tyr Met Trp Pro	
145 430 435 440	
147 tcc gtc cca gat gag aag ggc gag ctg ctg aac ccc acg ggc act gtg	1573
148 Ser Val Pro Asp Glu Lys Gly Glu Leu Leu Asn Pro Thr Gly Thr Val	
149 445 450 455	
151 cgc agt aac ccc aac acg gat agc gcc gct gcc ctg ctc atc tgc ctg	1621
152 Arg Ser Asn Pro Asn Thr Asp Ser Ala Ala Leu Leu Ile Cys Leu	
153 460 465 470 475	
155 ccc gag gtg gcc ccg cac ccc gtg tac tac ccc gcc ctg gag aag atc	1669
156 Pro Glu Val Ala Pro His Pro Val Tyr Tyr Pro Ala Leu Glu Lys Ile	
157 480 485 490	
159 ttg gag ctg ggg cga cac agc gag tgt gtg cat gtc acc gag gag gag	1717
160 Leu Glu Leu Gly Arg His Ser Glu Cys Val His Val Thr Glu Glu Glu	
161 495 500 505	
163 cag ctg cag ctg cgg gaa atc ctg gag cgg cgg ggg tct ggg gag ctg	1765
164 Gln Leu Gln Leu Arg Glu Ile Leu Glu Arg Arg Gly Ser Gly Glu Leu	
165 510 515 520	
167 tat gag cac gag aag gac ctg gtg tgg aag ctg cgg cat gaa gtc cag	1813
168 Tyr Glu His Glu Lys Asp Leu Val Trp Lys Leu Arg His Glu Val Gln	
169 525 530 535	
171 gag cac ttc ccg gag gcg cta gcc cgg ctg ctg gtc acc aag tgg	1861
172 Glu His Phe Pro Glu Ala Leu Ala Arg Leu Leu Val Thr Lys Trp	
173 540 545 550 555	
175 aac aag cat gag gat gtg gcc cag atg ctc tac ctg ctg tgc tcc tgg	1909
176 Asn Lys His Glu Asp Val Ala Gln Met Leu Tyr Leu Leu Cys Ser Trp	
177 560 565 570	
179 ccg gag ctg ccc gtc ctg agc gcc ctg gag ctg cta gac ttc agc ttc	1957
180 Pro Glu Leu Pro Val Leu Ser Ala Leu Glu Leu Leu Asp Phe Ser Phe	
181 575 580 585	
183 ccc gat tgc cac gta ggc tcc ttc gcc atc aag tcg ctg cgg aaa ctg	2005
184 Pro Asp Cys His Val Gly Ser Phe Ala Ile Lys Ser Leu Arg Lys Leu	
185 590 595 600	
187 acg gac gat gag ctg ttc cag tac ctg ctg cag ctg gtg cag gtg ctc	2053
188 Thr Asp Asp Glu Leu Phe Gln Tyr Leu Leu Gln Leu Val Gln Val Leu	
189 605 610 615	
191 aag tac gag tcc tac ctg gac tgc gag ctg acc aaa ttc ctg ctg gac	2101
192 Lys Tyr Glu Ser Tyr Leu Asp Cys Glu Leu Thr Lys Phe Leu Leu Asp	
193 620 625 630 635	
195 cgg gcc ctg gcc aac cgc aag atc ggc cac ttc ctt ttc tgg cac ctc	2149

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199	cgc	tcc	gag	atg	cac	gtg	ccg	tcg	gtg	gcc	ctg	cgc	ttc	ggc	ctc	atc	2197
200	Arg	Ser	Glu	Met	His	Val	Pro	Ser	Val	Ala	Leu	Arg	Phe	Gly	Leu	Ile	
201								655		660						665	
203	ctg	gag	gcc	tac	tgc	agg	ggc	agg	acc	cac	cac	atg	aag	gtg	ctg	atg	2245
204	Leu	Glu	Ala	Tyr	Cys	Arg	Gly	Arg	Thr	His	His	Met	Lys	Val	Leu	Met	
205								670		675						680	
207	aag	cag	ggg	gaa	gca	ctg	agc	aaa	ctg	aag	gcc	ctg	aat	gac	ttc	gtc	2293
208	Lys	Gln	Gly	Glu	Ala	Leu	Ser	Lys	Leu	Lys	Ala	Leu	Asn	Asp	Phe	Val	
209								685		690						695	
211	aag	ctg	agc	tct	cag	aag	acc	ccc	aag	ccc	cag	acc	aag	gag	ctg	atg	2341
212	Lys	Leu	Ser	Ser	Gln	Lys	Thr	Pro	Lys	Pro	Gln	Thr	Lys	Glu	Leu	Met	
213	700						705				710					715	
215	cac	ttg	tgc	atg	cgg	cag	gag	gcc	tac	cta	gag	gcc	ctc	tcc	cac	ctg	2389
216	His	Leu	Cys	Met	Arg	Gln	Glu	Ala	Tyr	Leu	Glu	Ala	Leu	Ser	His	Leu	
217								720		725						730	
219	cag	tcc	cca	ctc	gac	ccc	agc	acc	ctg	ctg	gct	gaa	gtc	tgc	gtg	gag	2437
220	Gln	Ser	Pro	Leu	Asp	Pro	Ser	Thr	Leu	Leu	Ala	Glu	Val	Cys	Val	Glu	
221								735		740						745	
223	cag	tgc	acc	ttc	atg	gac	tcc	aag	atg	aag	ccc	ctg	tgg	atc	atg	atc	2485
224	Gln	Cys	Thr	Phe	Met	Asp	Ser	Lys	Met	Lys	Pro	Leu	Trp	Ile	Met	Tyr	
225								750		755						760	
227	agc	aac	gag	gag	gca	ggc	agc	ggc	ggc	atc	atc	atc	ttt	aag			2533
228	Ser	Asn	Glu	Glu	Ala	Gly	Ser	Gly	Gly	Ser	Val	Gly	Ile	Ile	Phe	Lys	
229								765		770						775	
231	aac	ggg	gat	gac	ctc	cg	cag	gac	atg	ctg	acc	ctg	cag	atg	atc	cag	2581
232	Asn	Gly	Asp	Asp	Leu	Arg	Gln	Asp	Met	Leu	Thr	Leu	Gln	Met	Ile	Gln	
233	780						785				790					795	
235	ctc	atg	gac	gtc	ctg	tgg	aag	cag	gag	ggg	ctg	gac	ctg	agg	atg	acc	2629
236	Leu	Met	Asp	Val	Leu	Trp	Lys	Gln	Glu	Gly	Leu	Asp	Leu	Arg	Met	Thr	
237								800		805						810	
239	ccc	tat	ggc	tgc	ctc	ccc	acc	ggg	gac	cgc	aca	ggc	ctc	att	gag	gtg	2677
240	Pro	Tyr	Gly	Cys	Leu	Pro	Thr	Gly	Asp	Arg	Thr	Gly	Leu	Ile	Glu	Val	
241								815		820						825	
243	gta	ctc	cgt	tca	gac	acc	atc	gcc	aac	atc	caa	ctc	aac	aag	agc	aac	2725
244	Val	Leu	Arg	Ser	Asp	Thr	Ile	Ala	Asn	Ile	Gln	Leu	Asn	Lys	Ser	Asn	
245								830		835						840	
247	atg	gca	gcc	aca	gcc	gcc	ttc	aac	aag	gat	gcc	ctg	ctc	aac	tgg	ctg	2773
248	Met	Ala	Ala	Thr	Ala	Ala	Phe	Asn	Lys	Asp	Ala	Leu	Leu	Asn	Trp	Leu	
249								845		850						855	
251	aag	tcc	aag	aac	ccg	ggg	gag	gcc	ctg	gat	cga	gcc	att	gag	gag	ttc	2821
252	Lys	Ser	Lys	Asn	Pro	Gly	Glu	Ala	Leu	Asp	Arg	Ala	Ile	Glu	Glu	Phe	
253	860							865			870					875	
255	acc	ctc	tcc	tgt	gtc	tat	tgt	gtg	gcc	aca	tat	gtg	ctg	ggc	att		2869
256	Thr	Leu	Ser	Cys	Ala	Gly	Tyr	Cys	Val	Ala	Thr	Tyr	Val	Leu	Gly	Ile	
257								880		885						890	
259	ggc	gat	cg	cac	agc	gac	aac	atc	atg	atc	cga	gag	agt	ggg	cag	ctg	2917
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RAW SEQUENCE LISTING
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265	910	915	920	
267	gga atc aac cgc gag cgt gtc cca ttc atc ctc acc tac gac ttt gtc			3013
268	Gly Ile Asn Arg Glu Arg Val Pro Phe Ile Leu Thr Tyr Asp Phe Val			
269	925	930	935	
271	cat gtg att cag cag ggg aag act aat aat agt gag aaa ttt gaa cgg			3061
272	His Val Ile Gln Gln Gly Lys Thr Asn Asn Ser Glu Lys Phe Glu Arg			
273	940	945	950	955
275	ttc cgg ggc tac tgt gaa agg gcc tac acc atc ctg cgg cgc cac ggg			3109
276	Phe Arg Gly Tyr Cys Glu Arg Ala Tyr Thr Ile Leu Arg Arg His Gly			
277	960	965	970	
279	ctt ctc ttc ctc cac ctc ttt gcc ctg atg cgg gcg gca ggc ctg cct			3157
280	Leu Leu Phe Leu His Leu Phe Ala Leu Met Arg Ala Ala Gly Leu Pro			
281	975	980	985	
283	gag ctc agc tgc tcc aaa gac atc cag tat ctc aag gac tcc ctg gca			3205
284	Glu Leu Ser Cys Ser Lys Asp Ile Gln Tyr Leu Lys Asp Ser Leu Ala			
285	990	995	1000	
287	ctg ggg aaa aca gag gag gag gca ctg aag cac ttc cga gtg aag ttt			3253
288	Leu Gly Lys Thr Glu Glu Ala Leu Lys His Phe Arg Val Lys Phe			
289	1005	1010	1015	
291	aac gaa gcc ctc cgt gag agc tgg aaa acc aaa gtg aac tgg ctg gcc			3301
292	Asn Glu Ala Leu Arg Glu Ser Trp Lys Thr Lys Val Asn Trp Leu Ala			
293	1020	1025	1030	1035
295	cac aac gtg tcc aaa gac aac agg cag tag tggctcctcc cagccctggg			3351
296	His Asn Val Ser Lys Asp Asn Arg Gln			
297	1040			
299	ccaaagagga ggccggctgcg ggctgtgggg accaaggcaca ttggctctaa aggggctgaa			3411
301	gaggcctgaac tgcacctaac gggaaagaac cgacatggct gcctttgtt tacactgttt			3471
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307	accccaagtc ttccagctgg tggatctggg cccagcaaag actgttctcc tcccgaggga			3651
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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/049,743

DATE: 03/12/2002

TIME: 17:31:11

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\03122002\J049743.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date